

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-32. (cancelled)

33. (new) An integrated air flow sensor comprising: a body forming a passage,

a flow rate detection means which detects the air flow rate which flows in said passage,

a throttle means controlled by an electric signal, which limits said air flow rate by reducing the flow, said body, said flow rate detection means and said throttle means being integrated, and

a means which integrates the air flow rate signal of said flow rate detection means when a reduction rate of an amount of reduction by said throttle means is less than a fixed value.

34. (new) The integrated air flow sensor according to claim 33, further comprising a microcomputer integrated with said integrated air flow sensor, wherein the integral operation is carried out by software of said microcomputer.

35. (new) An integrated air flow sensor comprising: a body forming a passage,

a flow rate detection means which detects the air flow rate which flows in said passage,

a throttle means controlled by an electric signal, which limits said air flow rate by reducing the flow, said body, said flow rate detection means and said throttle means being integrated, and

a means which integrates the air flow rate signal of said flow rate detection means according to a reduction rate of an amount of reduction by said throttle means.

36. (new) The integrated air flow sensor according to claim 35, further comprising a microcomputer integrated with said integrated air flow sensor, wherein the integral operation is carried out by software of said microcomputer.

37. (new) An integrated air flow sensor comprising:

a body forming a passage,

a flow rate detection means which detects the air flow rate which flows in said passage,

a throttle means controlled by an electric signal, which limits said air flow rate by reducing the flow, said body, said flow rate detection means and said throttle means being integrated, and

a plurality of integrators which integrates the air flow rate signal of said flow rate detection means,

wherein said integrator is selected according to a reduction rate of an amount of reduction by said throttle means.

38. (new) The integrated air flow sensor according to claim 37, further comprising a microcomputer integrated with said integrated air flow sensor,

wherein the integral operation is carried out by an integrator and software of said microcomputer.

39. (new) The integrated air flow sensor according to claim 38, wherein the reduction rate of an amount of reduction by said throttle means is obtained based on a signal from an opening sensor for detecting the opening of said throttle means or a signal from an accelerator pedal sensor for detecting the opening of an accelerator pedal.

40. (new) An integrated air flow sensor comprising: a body forming a passage,

a flow rate detection means which detects the air flow rate which flows in said passage,

a throttle means controlled by an electric signal, which limits its said air flow rate by reducing the flow, said body, said flow rate detection means and said throttle means being integrated, and

an integrator which integrates the air flow rate signal of said flow rate detection means,

wherein the air flow rate signal is directly output by by-passing said integrator when a reduction rate of an amount of reduction by said throttle means is more than a fixed value.

41. (new) An integrated air flow sensor comprising: a body forming a passage,

a flow rate detection means which detects the air flow rate which flows in said passage, and

a throttle means controlled by an electric signal, which limits said air flow rate by reducing the flow, said body, said flow rate detection means and said throttle means being integrated;

wherein the air flow rate signal of said flow rate detection means is addition-amended and output when a reduction rate of an amount of reduction by said throttle means is more than a fixed value.

42. (new) The integrated air flow sensor according to claim 41, wherein said addition amendment is carried out through differentiators.

43. (new) The integrated air flow sensor according to claim 42, wherein said differentiators have differential constant with one another, and wherein said differentiator is selected according to an opening rate of said throttle means or an opening rate of said accelerator pedal.

44. (new) The integrated air flow sensor according to claim 41, wherein said addition amendment is carried out through adders.

45. (new) The integrated air flow sensor according to claim 44, wherein said adders have differential constant with one another, and wherein said adders is selected according to an opening rate of said throttle means or an opening rate of said accelerator pedal.

46. (new) The integrated air flow sensor according to claim 41, further comprising a microcomputer integrated with said integrated air flow sensor,

wherein said addition amendment is carried out by software of said microcomputer.

47. (new) An integrated air flow sensor comprising:

a body forming a passage,

a flow rate detection means which detects the air flow rate which flows in said passage,

a throttle means controlled by an electric signal, which limits said air flow rate by reducing the flow, said body, said flow rate detection means and said throttle means being integrated, and

an air flow rate calculation means having a plurality of output basic data, which calculates the air flow rate by using the output basic data selected from a plurality of said output basic data with an external signal.

48. (new) The integrated air flow sensor according to claim 47, wherein the selection of said output basic data is performed once for all.

49. (new) The integrated air flow sensor according to claim 47, wherein the selection of said output basic data can be changed only when the specified condition is satisfied.

50. (new) The integrated air flow sensor according to claim 47, further comprising:

a microcomputer which controls said throttle means and calculates said air flow rate,

a ROM, and

a flash memory, an EEPROM, a phase ROM or a Zenar zap;

wherein said plural output basic data is stored in the ROM, and said selection is performed by the flash memory, the EEPROM, the phase ROM or the Zenar zap.

51. (new) An integrated air flow sensor comprising:

a body forming a passage, a sub-passage,

a flow rate detection means having a heating resistor provided in said sub-passage, which detects the air flow rate which flows in said passage,

a throttle means controlled by an electric signal, which limits said air flow rate by reducing the flow, and

a control module provided with a microcomputer and an electronic circuit, which controls said throttle means and the heating of said heating resistor, said body,

said flow rate detection means, said throttle means and said circuit module being integrated.

52. (new) The integrated air flow sensor according to claim 51, wherein said throttle means is controlled by said microcomputer, and the heating of said heating resistor is controlled by said electronic circuit.

53. (new) The integrated air flow sensor according to claim 51, wherein the flow rate detected by said flow rate detection means is amended by said microcomputer.

54. (new) An integrated air flow sensor comprising: a body forming an air passage,

an air flow rate detection means which detects the air flow rate which flows in said passage,

a throttle means controlled by an electric signal, which limits said air flow rate by reducing the flow, and

a pressure detection means which detects the pressure at the downstream of said throttle means,

said body, said flow rate detection means, said throttle means and said pressure detection means being integrated;

further comprising an air flow rate calculation means which calculates the corrected air flow rate from the air flow detected by said air flow rate detection means, the pressure detected by said pressure detection means, the engine speed, the reduction amount by said throttle means and the air temperature.